

Notice of Allowability	Application No.	Applicant(s)	
	10/714,658	JEONG, JIN-HEE	
	Examiner	Art Unit	
	DUC Q. DINH	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/08/08.
2. ☒ The allowed claim(s) is/are 1-12.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____ | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____ |


 DUC Q. DINH
 Primary Examiner
 Art Unit: 2629

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 8, 2007 has been entered.

Allowable Subject Matter

2. Claims 1-12 are allowed.

The present invention related to a method of driving a plasma display for preventing heavy reduction of wall charges after the reset period for improving addressing characteristics and improving the contrast for the plasma display. Each independent claim identifies the uniquely distinct features:

In reference to claim 1,

during a reset period,

applying a ramp voltage to the sustain electrode to a first voltage after a previous sustain period is complete; maintaining the address electrode and the sustain electrode at a second voltage, and

applying a rising ramp voltage to the scan electrode, the rising ramp voltage gradually rising from a third voltage to a fourth voltage, the third voltage being less than a discharge firing voltage with respect to the sustain electrode and the fourth voltage being greater than the discharge firing voltage;

applying a falling ramp voltage to the scan electrode while maintaining the sustain electrode at a first bias voltage, the falling ramp voltage gradually falling to a predetermined voltage from the third voltage; and

maintaining the sustain electrode at a second bias voltage below the first bias voltage while maintaining the scan electrode at the predetermined voltage after the applying a falling ramp voltage.

In reference to claim 6,

a controller for externally receiving video signals, and generating an address driving signal, first electrode driving signals and second electrode driving signals; an address driver for receiving the address driving signal from the controller, and

applying a display data signal for selecting a discharge cell to be displayed to the address electrode; a first driver for receiving the first electrode driving signals from the controller, and

applying a voltage to a first electrode of a discharge cell selected for discharge to generate discharge in the discharge cell; and

a second driver for receiving the second electrode driving signals from the controller, and applying a voltage to a second electrode of the discharge cell selected for discharge so that the discharge cell selected for discharge may maintain maintains discharging for a predetermined time,

wherein the first driver applies a voltage that is ramp-risen to a first voltage level to the first electrode, maintains the voltage at a second voltage level below the first voltage level, ramp-falls the voltage to a third voltage level, and maintains the voltage at the third voltage level, and

wherein the second driver applies a first bias voltage to the second electrode while the voltage at the first electrode is ramp-fallen to the third voltage level, and applies a second bias voltage below the first bias voltage to the second electrode while the first electrode is maintained at the third voltage level.

In reference to claim 8,

during a reset period,

applying a falling ramp voltage to the scan electrode and applying a first bias voltage to the sustain electrode; and

applying a second bias voltage to the sustain electrode after applying the falling ramp voltage, the second bias voltage having a voltage level lower than a voltage level of the first bias voltage; and

applying a predetermined voltage to the scan electrode after applying the falling ramp voltage, wherein the falling ramp voltage falls to the predetermined voltage.

In reference to claim 12,

during a reset period,

applying a ramp voltage to the sustain electrode to a first voltage after a previous sustain period is complete;

maintaining the address electrode at a second voltage, maintaining the sustain electrode at a third voltage, and applying a rising ramp voltage to the scan electrode, the rising ramp voltage gradually rising from a fourth voltage to a fifth voltage, the fourth voltage being less than a discharge firing voltage with respect to the sustain electrode and the fifth voltage being greater than the discharge firing voltage;

applying a falling ramp voltage to the scan electrode while maintaining the sustain electrode at a first bias voltage, the falling ramp voltage gradually falling to a predetermined voltage from the fourth voltage; and

maintaining the sustain electrode at a second bias voltage below the first bias voltage while maintaining the scan electrode at the predetermined voltage after the applying a falling ramp voltage.

The closest prior art of Takayama et al. (U.S Patent No. 6,249,087) and Applicant Admitted Prior Art, Figures 1-6, pages 1-5 show similar systems, but either singularly or in combination, fail to anticipate or render above quoted limitations obvious.

3. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to DUC Q. DINH whose telephone number is (571) 272-7686. The examiner can normally be reached on Mon-Fri from 8:00.AM-4:00.PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, RICHARD HJERPE can be reached on (571)272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



DUC Q DINH
Primary Examiner
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